

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF OHIO  
EASTERN DIVISION

RESPONSIVE INNOVATIONS, LLC	)	Case No. 4:08-cv-01184
and TURNING TECHNOLOGIES, LLC,	)	
	)	
Plaintiffs,	)	Judge Peter C. Economus
	)	
v.	)	
	)	<b><u>Memorandum Opinion and Order</u></b>
HOLTZBRINCK PUBLISHERS, LLC	)	
and	)	
MACMILLAN PUBLISHERS, INC.,	)	
	)	
Defendants.	)	

**I. INTRODUCTION**

This matter is before the Court to construe the disputed claim terms of Claims 1, 8, and 9 of U.S. Patent No. 7,330,716 (“the ‘716 Patent”) pursuant to *Markman v. Westview Instruments*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

The parties submitted a Joint Claim Construction Chart (Dkt. No. 24) to the Court on November 14, 2008. Pursuant to the Court’s briefing schedule, the parties submitted Opening Claim Construction Briefs (Dkt. Nos. 28 and 29) on December 15, 2008 and Response Claim Construction Briefs (Dkt. Nos. 30 and 31) on January 15, 2009. Plaintiffs also submitted a PowerPoint presentation (Dkt. No. 36) that they presented at the oral argument held by the Court on January 21, 2009.

The Court’s construction of the disputed terms is set forth below.

**II. BACKGROUND**

Plaintiffs Responsive Innovations, LLC (“Responsive”) and Turning Technologies, LLC (“Turning”) (collectively “Plaintiffs”) allege that Defendants Holtzbrinck Publishers, LLC (“Holtzbrinck”) and Macmillan Publishers, Inc. (collectively “Defendants”), through

Defendants' i>clicker wireless audience response system, infringe certain claims of the '716 Patent. The '716 Patent (entitled "Wireless Communication System") names Kevin Adkins, Responsive's President, as sole inventor, and is assigned to Responsive. Turning is the exclusive licensee of the '716 Patent. Defendants deny that they infringe and further deny that the patent is valid.

The '716 Patent contains one independent claim (claim 1). Claim 1 is as follows (with the disputed claim terms underlined):

1. A wireless communication system comprising:  
a plurality of handheld devices, each handheld device including:  
a transmitter,  
an input selection control, and  
a processor configured to receive a user selection from the input selection control; and upon receipt of the user selection, communicate instructions to the transmitter to transmit an RF signal encoding an address and the user selection according to a defined RF profile,  
wherein the defined RF profile comprises a distinct period of no RF transmission, and  
a first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection from the input selection control;  
and  
a receiver including a transceiver configured for data communication with a processor.

Dependent claims 2-5 and 8-9 are also asserted in this litigation. Claims 8 and 9 contain additional disputed limitations to be construed. Because claim 8 depends from claim 5, claim 5 is also included below (with the disputed claim terms underlined):

5. The system of claim 1, wherein the defined RF profile further comprises:  
a second period of RF transmission corresponding to transmission of an acknowledgment, where the second period of RF transmission occurs after the start of the first period and is responsive to receipt of the RF signal by the receiver.

8. The system of claim 5, wherein the second period of RF transmission is followed by a distinct period of no RF transmission.

9. The system of claim 1, wherein the defined RF profile includes a transmission interval separating periodic retransmissions of the RF signal.

### **III. LEGAL SECTION (STANDARD OF REVIEW)**

#### **A. The Claim Construction Process**

Claim construction is a matter of law for the Court to determine. *Markman*, 52 F.3d at 979. The Court's task in this regard is to "inform the meaning of the claim language." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc). Put another way, the Court's assignment is "the contextual interpretation of language." *Smithkline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1339 (Fed. Cir. 2005). The three main sources for claim construction are the claims themselves, the written specification of which the claims are a part, and the prosecution history or file wrapper representing the back-and-forth discussion between the inventor and the Patent and Trademark Office ("PTO"). *Markman*, 52 F.3d at 979-80. These sources are collectively referred to as the intrinsic record of the patent. *Chimie v. PPG Indus. Inc.*, 402 F.3d 1371, 1377 (Fed.Cir.2005).

The words of a claim "are generally given their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312. The ordinary and customary meaning is to be determined from the perspective of one of ordinary skill in the art at the time of the invention. *Id.* at 1313. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

Accordingly, the court first looks to the claim language, read in view of the specification. *Id.* at 1315 (The specification "is always highly relevant to the claim construction analysis.

Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.”).

However, while the court may look to the written description to define a term already in a claim limitation, the court may not read a limitation from the written description into a claim. *Id.* at 1323. In other words, although it is often stated that a patentee may be his own lexicographer, “a claim must explicitly recite a term in need of definition before a definition may enter the claim from the written description.” *Renishaw PLC v. Marposs Societa per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

The prosecution history is also relevant to claim construction as part of the intrinsic record. *Phillips*, 415 F.3d at 1317.<sup>1</sup> For example, an inventor may disclaim a particular claim construction during prosecution before the PTO. *Hockerson-Halberstadt, Inc. v. Avia Group Intern., Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000). However, prosecution history is often ambiguous, *Inverness Medical Switzerland v. Warner Lambert Co.*, 309 F.3d 1373, 1382 (Fed. Cir. 2002), and courts must consider it carefully. *Phillips*, 415 F.3d at 1317 (“because the prosecution history represents an ongoing negotiation between the Patent and Trademark Office (‘PTO’) and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.”) While the prosecution history, including art referenced in the patent, may be used to inform the meaning of the claims, *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005), using a prior art reference to infer what the Examiner or the applicant thought about the meaning of a term, based on whether a particular claim interpretation would read on the reference, is not an appropriate use of the prosecution history. At claim construction, the court is “not concerned with the state or scope of the prior art.” *Sky Technologies, LLC v. Ariba, Inc.*, 491 F.Supp. 2d,

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<sup>1</sup> The ‘716 Patent’s prosecution file wrapper (Dkt. 29, Ex. 4, RI000909 to RI001054) was admitted into evidence at the *Markman* hearing. *Markman* Tr. 29:16-24.

154, 157 (D.Mass. 2007) (citations omitted). The court “is also not concerned with how far the patent or claims as a whole may extend in terms of breadth of subject matter. A court is concerned only with the interpretation of a disputed term.” *Id.*

Other evidence of claim meaning such as inventor testimony, expert testimony, and lay or technical dictionary definitions is referred to as extrinsic evidence. *Phillips*, 415 F.3d at 1317. However, extrinsic evidence is less important than the intrinsic evidence and cannot contradict a claim definition from the intrinsic record. *Id.* at 1318-19; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004) (explaining “that the intrinsic record is the primary source for determining claim meaning”). The only extrinsic evidence offered by the parties in this case is from general purpose and technical dictionaries.

**B. The Limited Role of Invalidity Arguments At *Markman***

Patents are presumed valid. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Nevertheless, the role of invalidity arguments at claim construction is narrow. If a term is ambiguous, a court may consider whether it can avoid assigning a meaning to a term that potentially renders the claim invalid as indefinite, if that ““can be done consistently with the language which [the patentee] has employed.”” *Phillips*, 415 F.3d at 1328 (citation omitted). Only claims not amenable to construction or insolubly ambiguous are indefinite. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

Otherwise, the *Markman* proceeding is not the appropriate place to consider issues of validity. Invalidity and claim construction determinations involve separate analyses that take place at different phases of the case. *See, e.g., Dow Chemical Co. v. Astro-Valcour, Inc.*, 47 F.Supp.2d 294, 300 (N.D.N.Y. 1999); *Stairmaster Sports/Med. Prods., Inc. v. Groupe Procycle, Inc.*, 1998 WL 290296, at \*2 n.5 (D.Del. May 20, 1998) (Federal Circuit “draw[s] line between claim construction issues and issues of infringement and invalidity”). And, the determinations

are subject to different burdens of proof. For example, a prior art reference must be shown by clear and convincing evidence to teach each and every element of the claim at issue for a claim to be found anticipated. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1327 (Fed. Cir. 2008). Moreover, what is taught by a prior art reference is a question of fact. *Id.* If a court prejudges validity at claim construction, it usurps the role of the fact-finder and risks reversal. *See* Patent Case Management, Judicial Guide § 5.1.3.6 (“The Need to Focus *Markman* Proceedings on Claim Interpretation”) (forthcoming, Federal Judicial Center (2009)) (available at [http://www.fjc.gov/library/fjc\\_catalog.nsf](http://www.fjc.gov/library/fjc_catalog.nsf)). Therefore, validity issues are best left for decision in proceedings subsequent to a court’s claim construction ruling, such as on motion for summary judgment of invalidity (*see* Dkt. 28 at 16 n.2) or at trial.

#### **IV. DISCUSSION**

##### **A. The ‘716 Patent and Its Prosecution History**

The ‘716 Patent issued on February 12, 2008 from U.S. Patent Application No. 11/336,361 (“the ‘361 application”), filed on January 20, 2006. That application claims priority to a provisional application, filed January 21, 2005. *Id.*

##### **1. Overview**

The ‘716 Patent is generally directed to audience response systems, that is systems “employed to retrieve (or receive) responses from a group of individuals at a central location.” ‘716 Patent, col. 1, ll. 18-20. According to the patent, such systems are used in classroom settings, corporate meetings, or in gatherings of individuals. *Id.*, col. 1, ll. 20-21. The patent states that audience response systems “may include at least one base unit [receiver] and a plurality of handheld units.” *Id.*, col. 1, ll. 22-23. The handheld devices will typically include a

keypad for inputting user responses. *Id.*, col. 1, ll. 23-24. The audience response system described in the patent employs radio frequency (“RF”) signals for communication.

The background section of the ‘716 Patent discusses wireless audience response systems in the prior art. In one known embodiment of these prior art systems, the receiver controls communications by polling each handheld unit. ‘716 Patent, col. 1, ll. 25-26. If a user has entered a response into the keypad of the handheld unit, the response is transmitted to the receiver when the handheld unit is polled by the receiver. *Id.*, col. 1, ll. 25-28. After receipt of the response from the handheld unit, the receiver may send an acknowledgment signal. *Id.*, col. 1, ll. 29-30. By contrast, in the claimed invention of the ‘716 Patent, the handheld unit initiates communications by sending the first transmission, i.e., without waiting for a polling transmission from the base unit. RI000963 (Aug. 3, 2007 Response to Office Action, p. 10).

Both Plaintiffs and Defendants market and sell RF-based audience response systems that employ handheld-initiated communications rather than the receiver-initiated communications of the prior art.

## **2. The Claims and the Written Description**

The ‘716 Patent contains thirteen claims: one independent claim (claim 1) and twelve dependent claims. Claims 1-5, 8, and 9 are asserted in this litigation. In part, claim 1 sets forth hardware components of the wireless communication system: namely, a plurality of handheld devices (each including a transmitter, an input selection control, and a processor) and a receiver (including a transceiver). Examples of possible configurations for the handheld devices and the receiver are shown in Figures 3 and 4 in the ‘716 Patent. In the embodiment depicted in those figures and described in the written text, the handheld devices are configured to process and send RF transmissions to, and receive transmissions from, the receiver. ‘716 Patent, Fig. 3 & col. 4, ll. 1-7. As shown, the handheld devices use computer logic to generate an RF signal and RF

transceiver (transmitter/receiver combination) for signal transmission and receipt. *Id.* & col. 4, ll. 37-40. The receiver is similarly configured for both RF receipt and transmission. *Id.*, Fig. 4 & col. 7, ll. 5-7; 13-20.

Claim 1 also sets forth characteristics of an RF profile (or protocol) for communication between each handheld device and the receiver. Claim 1 and all other claims of the '716 Patent refer to a single RF profile ("the defined RF profile"). This profile is progressively added to as the claims proceed. In particular, claim 1 provides that the profile includes a "first period of RF transmission" from each handheld device (1) that is responsive to receipt of the user selection from the input selection control and (2) that occurs after a distinct period of no RF transmission. *Id.*, col. 10, ll. 59-65. Dependent claims 5, 8, and 9 add further limitations to the RF profile of claim 1, including a transmission interval separating periodic retransmissions of the handheld device's first period of RF transmission [claim 9]; a second period of RF transmission that corresponds to transmission of an acknowledgment by the receiver [claim 5]; and another distinct period of no RF transmission following the second period of RF transmission from the receiver [claim 8]. *Id.*, col. 11, ll. 15-21 and col. 12, ll. 4-9.

This claim structure tracks back into the patent's written description and drawings and, in particular, to Figure 7, which depicts in a single drawing the combined handheld-receiver profile that is only progressively revealed by the claims. Thus, in describing Figure 7, the specification explains that "the handheld device 705 makes no transmission until it receives a selection from a user." '716 Patent, col. 9, ll. 21-22. Similarly, "[t]he receiver 735 makes no transmission until it receives an RF signal" from a handheld device. *Id.*, col. 9, ll. 54-55. Following this "distinct period of no RF transmission" (shown as 710 in Figure 7), there is a first period of RF transmission initiated by a user entering a selection on the handheld device: "Upon a user



entering a selection, the handheld device 705 transmits a first RF signal 720<sub>1</sub> at a frequency *f* thus initiating a first period of RF transmissions 725.” *Id.*, col. 9, ll. 24-27. Figure 5 similarly illustrates that the user’s selection initiates the first RF transmission period. *Id.*, Figure 5 (boxes 505 and 510).

As the specification further describes, when the receiver receives an RF signal from the handheld device, it initiates “a second period of RF transmissions 755” to acknowledge receipt by the receiver of the RF transmission signal from the handheld device. *Id.*, col. 9, ll. 56-63. In other words, unlike the first period of RF transmission, the second period of RF transmissions is initiated by the receiver communicating with the handheld device. As is clear from the figure and the specification, unlike the distinct period of no RF transmission, the second period of RF transmissions “overlaps with the first period of RF transmissions [725].” *Id.*, col. 9, ll. 62-64.<sup>2</sup> Then, “after the first and second periods 725, 755 are terminated, another distinct period of no RF transmissions follows.” *Id.*, col. 10, ll. 16-19.<sup>3</sup>

### **3. The ‘716 Patent Prosecution History**

As initially filed, the application that became the ‘716 Patent included 21 claims.

Original claim 1 reads as follows:

1. A wireless communication system comprising:
  - a plurality of handheld devices, each handheld device including:
    - a transmitter,
    - a computer-readable medium configured to store an address,
    - an input selection control, and

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<sup>2</sup> The Court notes that a Certificate of Correction was entered on August 26, 2008 correcting the bracketed reference above from 710 to 725. RI000909.

<sup>3</sup> The parties have disputed whether and to what extent Figure 7 depicts an overall RF profile or only separate RF profiles for the receiver and the representative handheld device. Arguments can be made on both sides: on the one hand, the figure separately labels a receiver profile as 700b and a handheld profile as 700a; on the other hand, an overall profile (700) can be inferred from this same sub-division. The structure of the claims, however, makes clear that the correct interpretation is that the claimed “defined RF profile” is an overall profile of the wireless system.

a processor configured to receive a user selection from the input selection control; and, upon receipt of the user selection, communicate instructions to the transmitter to transmit an RF signal encoding the address and the user selection according to a defined RF profile; and  
a receiver device including:

a transceiver,

a computer-readable medium, and

a processor configured to decode the RF signal into the address and the user selection following receipt by the transceiver, store the user selection in the computer-readable medium, generate an acknowledgment including a representation of the address, and communicate instructions to the transceiver to transmit the acknowledgement according to the defined RF profile.

RI001034.

In a first office action dated May 17, 2007, the Examiner found original claim 1 (among others) anticipated by a patent application filed by *Saar et al.* RI000976. However, the Examiner stated that original dependent claim 3 would be allowable over the prior art of record if it were amended to include the limitations of original claim 1. RI000982. Whereas original claim 1 provided no delineation of the profile's characteristics, claim 3 included a wherein clause as follows:

3. The system of claim 1, wherein the defined RF profile comprises:  
a distinct period of no RF transmission; and  
a first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection at the handheld device.

RI001034-35 (emphasis added). This language made clear that communications in the system were, unlike in the prior art, handheld-initiated.

In view of the Examiner's statements concerning the allowability of claim 3, the inventor amended the application to add new claim 23 (in which the RF profile-specific limitations of claim 3 were included), as well as twelve additional claims (24-35) that depended from it. After

an Examiner amendment, which added back certain limitations to the handheld device's processor that were found in original claim 1, the original claims were cancelled, and new claim 23 was allowed and issued as claim 1, while dependent claims 24-35 issued as claims 2-13. RI00927 (Dec. 7, 2007 Notice of Allowability, p. 1).<sup>4</sup>

In the Examiner's Statement of Reasons for Allowance, the Examiner emphasized that it was the language added by the applicant delineating certain characteristics of the RF profile (i.e., the language found in original claim 3) that was critical:

On the other hand, the Applicant teaches, the defined RF profile comprises *a distinct period of no RF transmission, and a first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection* from the input selection control. These limitations, in conjunction with all limitations of the independent claim, have not been disclosed, taught, or made obvious over the prior art of record.

RI00929-930 (Dec. 7, 2007 Notice of Allowability, pp. 3-4) (emphasis added to indicate original claim 3 language).

## **B. The Accused Product**

The accused product is Holtzbrinck's i>clicker wireless audience response system. It has been indicated to the Court that the i>clicker system includes a number of portable handheld devices and a receiver for collecting wireless voting signals from the portable handheld devices. Dkt. 28 at 2. The transmission of the wireless signals is not initiated by a signal by the receiver. *Id.* Rather, in the i>clicker system, RF signal communication is initiated from the handheld device when a user presses a button on that device to vote. *Id.* The handheld device's RF signal

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<sup>4</sup> The Examiner Amendment changed the processor limitation from "control the transmitter to transmit an RF signal according to a defined RF profile" back to "upon receipt of the user selection, communicate instructions to the transmitter to transmit an RF signal . . . according to a defined RF profile encoding the address and the user selection." RI000928-929 (Dec. 7, 2007 Notice of Allowability, pp. 2-3). (As can be seen, the remaining language is not changed, even though it appears that way because of the strikeout lines in the Amendment.) The new words (re-added from original claim 1) do not modify the RF profile but rather delimit the timing of the processor's instructions to the transmitter ("upon receipt of the user selection, communicate instructions to") and the content of the ensuing RF signal ("encoding an address and the user selection").

is retransmitted at irregular intervals unless a confirmation signal is received from the receiver indicating that the handheld device's signal was received. Dkt. 28 at. 2-3.

### **C. Agreed Claim Terms**

The Joint Claim Construction Chart submitted to the Court indicates agreement between the parties on the construction of two claim terms. Plaintiffs and Defendants agree that the term “encoding” in claim 1 should be construed as “to convert data.” Dkt. 24, Ex. A, p. 1. The parties further agree that the term “decode” in claim 3 should be construed as “to convert data by reversing the effect of previous encoding.” *Id.* The Court accepts and adopts those constructions.

### **D. Disputed Claim Terms**

The parties have identified the following terms and phrases they deem must be construed by the Court:<sup>5</sup>

#### **1. A defined RF Profile**

Plaintiffs' Proposed Construction: a communication protocol for a wireless system.

Defendants' Proposed Construction: a RF profile stored on the handheld device having an identifiable start point when the user inputs a selection and an end point.

The Court's Construction: a communication protocol for a wireless system for which meaning is provided by the language of the claims.

In their opening *Markman* brief, Plaintiffs contended that an RF profile is a communication protocol for a wireless system and that the RF profile claimed as “defined” is defined—i.e., has meaning or characteristics ascribed to it—by the language of the claims themselves. Dkt. 29 at 15.

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<sup>5</sup> Except as noted, the parties' proposed constructions are taken verbatim from the Joint Claim Construction Chart (Dkt. 24).

Defendants state that an RF profile “is a communication protocol” describing “certain characteristics” of communication sequence or “timing.” *See* Dkt. 28 at 1, 5, 8, 9. Nevertheless, Defendants argue for a much more limiting construction of the disputed phrase as “a RF profile stored on the handheld device having an identifiable start point when the user inputs a selection and an end point.”

The Court cannot agree with Defendants’ proposed limitation that the RF profile be “stored on” the handheld device. According to Defendants, that construction is compelled by claim 1’s “discuss[ion] [of] the defined RF profile *that is processed by the processor of the handheld device.*” Dkt. 28 at 8 (emphasis added). But that is not what the claim says. What claim 1 provides is that each handheld includes a processor configured in such a way that “upon receipt of the user selection” the processor will “communicate instructions to the [handheld’s] transmitter to transmit an RF signal . . . *according to* a defined RF profile.” ‘716 Patent, col. 10, ll. 56-58 (emphasis added). The claim does not refer to a profile that is “stored on” any physical device. Nor does the specification use these terms or suggest this confinement. Rather, as noted above, the claims and specification make clear that the claimed profile is a single protocol for handheld-receiver communications in the wireless system, the characteristics of which are provided by the language of the claims.<sup>6</sup>

Moreover, the fact that Defendants’ proposed construction is incompatible with the structure of the claims of the ‘716 Patent makes clear that the construction cannot be correct. As Plaintiffs noted in their opening brief, claim 5 (and claim 8 from which it depends) include as a

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<sup>6</sup> At the *Markman* hearing, Defendants argued that the specification, specifically Figure 3, supported their position that the RF profile is stored on the handheld device. *Markman* Tr. 37:7-12. But Figure 3, which depicts the components of an exemplary handheld device, does not refer to the RF profile at all. Therefore, Figure 3 actually supports Plaintiffs’ construction that the RF profile is not “stored” on the handheld device. An embodiment of the handheld device’s processing logic (depicted in Figure 5), which logic *is* presumably stored on the handheld, does not depict an RF profile. Therefore, the patent drawings do not support an RF profile “stored” on any single device of the wireless system.

further limitation to the defined RF profile of claim 1: a second period of RF transmissions “corresponding to transmission of an acknowledgment [by the receiver].” ‘716 Patent, col. 11, ll. 17-18. Defendants agree that claim 5 refers to receiver communications (Dkt. 28 at 25) and that it makes no sense to speak of such receiver transmissions as being part of an RF profile “stored” on the handheld device. Dkt. 28 at 24-25. But the Court is *required* to take claim 5 into account when interpreting the disputed term. *See Abbott Labs v. Syntron*, 334 F. 3d 1343, 1351 (Fed. Cir. 2003 (“usage of disputed claim terms in the context of the claims as a whole informs proper construction of the terms.”)) The Court finds that because claim 5 makes clear that the “defined RF profile” of claim 5 includes receiver communications, that claim phrase construed in light of the claims as a whole cannot be construed as stored on the handheld device. Further, the Court’s construction has the added benefit of allowing the term “defined RF profile” to be interpreted consistently in each of the claims in which it appears, a result that accords with basic claim construction principles. *See Phillips*, 415 F.3d at 1314.

The Defendants also contend that the adjective “defined” that precedes the words “RF profile” requires that the RF profile have an identifiable start point and an identifiable end point. Dkt. 28 at 11. However, there is nothing inherent in the word “defined” that suggests the requirement that Defendants seek to give it. Ordinarily, “defined” means something for which meaning is ascribed, or whose nature is described. *Webster’s Third New International Dictionary, Unabridged*, p. 592 (2002). Thus, a “defined” RF profile is nothing more than a communication rule for which a meaning is provided. The Court agrees with Plaintiffs that the claims themselves provide that meaning. For example, the wherein clause of claim 1 shows that an audience response system according to that claim must include handheld devices that each operate according to the rule that the first RF communication between a handheld device and the

system's receiver be initiated by the handheld device following a distinct period of no RF transmission.<sup>7</sup>

Neither the specification nor the prosecution history supports a different meaning for the word “defined.” Defendants argue that because Figure 7 provides an initial time ( $T_0$ ) at the start of the X axis of that diagram, there is an identifiable beginning point to the diagram, and thus, there must be one to the profile. But the diagram notation ( $T_0$ ) is not significant to the proper construction of the claim term. First, the patent nowhere discusses it. Undoubtedly, the absence of any mention of time  $T_0$  is because, as Plaintiffs explained at the hearing, the notation simply indicates that Figure 7 is a timing diagram attempting to depict what happens over time (moving left to right on the axis) rather than a snapshot of one static moment in time. Put another way,  $T_0$  is simply the starting point in time of the schematic depiction of the defined RF profile. Second, even if  $T_0$  had the heightened significance attributed to it by Defendants, it cannot be read into the claim from the drawing. The claim is not limited to a particular start time, and thus the Court cannot import that unclaimed requirement. *See e.g., Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002) (importing limitations from the specification into the claims is a “cardinal sin of claim construction”). *See also, SuperGuide Corp. v. DirecTV Enterprises, Inc.* 358 F.3d 870, 875 (Fed. Cir. 2004) (a particular embodiment appearing in the written description may not be read into the claim when the claim language is broader than the embodiment).

The Court also disagrees with Defendants' argument that the November 26, 2007, Examiner Amendment supports requiring a start point for the profile and requiring the start point to be the receipt of the user selection. First, that amendment did not modify the RF profile at all,

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<sup>7</sup> The Court further notes that the Defendants' proposed definition for “defined” is nearly identical to their proposed definition for “distinct.” This is contrary to the established canon of claim construction that different claim terms are presumed to have different meanings. *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n. 3 (Fed. Cir. 2006).

as is clear from the fact that the amended language appears *before* the phrase “according to a defined RF profile, wherein . . .” Rather, the added words describe the timing of the processor’s instructions to the transmitter (“upon receipt of the user selection, communicate instructions to”) and the content of the ensuing RF signal (“encoding an address and the user selection”). Second, as both parties appear to agree, it was the limitations of original claim 3 ascribing specific characteristics to the claimed RF profile—a first RF transmission period responsive to receipt of the user selection and preceded by a distinct period of no-RF transmission—that made that claim allowable over the prior art, and not any requirement for when the RF profile starts. In other words, the prosecution history supports Plaintiffs’ position that the characteristics of the “defined” RF profile are provided by the language of the claims.



**2. A first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection from the input selection control**

Plaintiffs' Proposed Construction: (1) A first period of RF transmission for the system corresponds to transmission of an RF signal by the handheld device. (2) The first period of RF transmission: occurs after a definable period of time during which there is no transmission of an RF signal between the handheld device and the receiver; and is initiated by the user selection from the input selection control.

Defendants' Proposed Construction: [A first period of RF transmission that is preceded by] a distinct and set period of no RF transmission beginning with the receipt of the user selection and ending with the transmission of the RF signal. However the patent does not teach how long the distinct period is or how that length is determined.<sup>8</sup>

The Court's construction: The RF profile includes a first period of RF transmission that corresponds to transmission of an RF signal by the handheld device that (1) occurs after a separate or non-overlapping period of time during which there is no transmission of an RF signal between the handheld device and the receiver and (2) is initiated by the user selection from the input selection control.

This disputed claim phrase (the wherein clause of claim 1) describes the characteristics of the “defined RF profile” required by that claim, and in particular the characteristics of the first period of RF transmission. Within this clause, the parties’ dispute is principally over the meaning of the phrase “distinct period of no RF transmission.” A second dispute concerns the meaning of the phrase “responsive to receipt of the user selection.” The proper construction of each of these phrases, as well as the wherein clause as a whole, is set forth below.

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<sup>8</sup> The bracketed language does not appear in the Joint Claim Construction Chart but was a correction provided by Defendants in their opening *Markman* brief. Dkt. 28 at 20 n. 4.

**a. “distinct period of no RF transmission”**

Plaintiffs’ Proposed Construction: a definable period of time during which there is no transmission of an RF signal from either the handheld device or the receiver.

Defendants’ Proposed Construction: a set period of time with a definable start point when the user inputs a selection and an end point when the transmitter transmits. However, the patent does not teach how long the distinct period is or how that length is determined.

The Court’s Construction: a separate or non-overlapping period of time during which there is no transmission of an RF signal from either the handheld device or the receiver.

The parties appear to agree that a “period of no RF transmission” is simply that: a period of time during which there is no transmission of an RF signal between the handheld device and the receiver. However, the parties disagree about how the adjective “distinct” affects the proper construction of the phrase. Plaintiffs propose construing the term “distinct” to mean definable, i.e., non-overlapping or separate. While Defendants have argued based on a general dictionary that the term “distinct” ordinarily means “not blurred” (Dkt. 28 at 14), they argue that “distinct” as used in claim 1 should be interpreted to mean “predetermined,” “set,” and “of known duration,” thereby requiring the phrase that it modifies (“period of no RF transmission”) to have a specific beginning point (the receipt of the user selection) and a specific ending point (the transmission of the first RF signal from the handheld).

The Court finds no reason to deviate from the ordinary meaning of the word “distinct” in construing the disputed claim phrase. In this regard, the Court notes that the ordinary meaning that both parties ascribe to the word “distinct” (Defendants’ “not blurred” or Plaintiffs’ “non-overlapping”) is very close. These nearly identical definitions of the term “distinct” find support in the context of the patent specification’s description of other claimed communication periods. The specification provides that the first and second periods of RF transmission “overlap.” ‘716

Patent, col. 9, ll. 62-64. This overlap is also shown in Figure 7. However, while the first and second period of RF transmission (which are *not* described or claimed as “distinct”) can and do blur together, the “distinct” periods of no RF transmission discussed in the patent are never described or depicted as overlapping with these periods. Thus, the claimed periods of no RF transmission are “distinct.”<sup>9</sup>

The Court is not persuaded by Defendants’ argument that the specification supports deviating from this meaning to add requirements that the distinct period have a “set” beginning point (the user selection) and an end point. Defendants argue that the notation on Figure 7 of an initial time ( $T_0$ ) must be a set point for the start of the distinct period of no RF transmission and that it must represent the point where the user makes a selection on the keypad. But, as noted above, this reads far too much into what plainly is a scientific notation indicating that the events depicted on the diagram are occurring over time. Further, there is no reference in the patent to  $T_0$  as having any relationship to the receipt of the user selection. Indeed, nothing in the specification of the ‘716 Patent correlates a distinct no RF transmission period with the receipt of the user selection. To the contrary, the only aspect of communication that the specification refers to as being initiated by user selection is the first period of RF transmission. *Id.*, col. 9, ll. 24-27 (“Upon a user entering a selection, the handheld device 705 transmits a first RF signal 720<sub>1</sub> . . . thus initiating a first period of RF transmissions 725.”); *see also* Figure 5 (Box 510 shows that the first occurrence following the user selection is transmission by the handheld

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<sup>9</sup> Defendants argued for the first time at the *Markman* hearing that the term “distinct” cannot be construed to mean “not overlapping,” because the claims require a “plurality” of handheld devices that are, or are capable of, operating at once, thereby creating the potential for overlapping transmission and non-transmission periods. *Markman* Tr. 45:24-46:25. The Court does not agree. The communication rules described in the patent and depicted in Figure 7 are rules that apply as between *each* handheld device and the receiver. The fact that the sole graphical depiction of the rule (Figure 7) shows the profile as between a single handheld and receiver, rather than an array of handhelds, strongly suggests that the pertinent rule is one between any handheld-receiver pair, regardless of how many devices are in use.

device, with no other events or periods occurring between the user selection and the first RF period).

Defendants also argued that the Examiner's Notice of Allowance confirmed that the distinct no-RF period "does not start until the user makes a selection[.]" Dkt. 28 at 15. However, the Notice of Allowance does not discuss, let alone confirm, a starting point for this period. The prosecution history should only be used to interpret terms that are directly addressed by it. *See Sky Technologies*, 491 F.Supp. 2d at 157 (citation omitted). Further, to the extent the prosecution history is unclear, it is given less weight. *Phillips*, 415 F.3d at 1317. Accordingly, because the cited history is clear about only one thing—that handheld-initiated communication was critical to patentability—it does not change the Court's views on the proper construction of this term. Therefore, the Court will not infer, on this evidence, that the patentee intended a special definition for the "distinct period of no RF transmission." This is especially true where adopting Defendants' construction would, by their own admission, render another claim (claim 8) indefinite. Doc. 28 at 22. By contrast, honoring the ordinary meaning of "distinct" will allow for a consistent and non-invalidating construction of that term in both claim 1 and claim 8. As such, that construction is preferable and consistent with the Federal Circuit's guidance on claim construction. *See Phillips*, 415 F.3d at 1314, 1327.

In their responding *Markman* brief, Defendants contend for the first time that if Plaintiffs' construction for the "distinct period of no RF transmission" were adopted, claim 1 would be invalid in view of a patent application filed by Glass, et al. (U.S. 2003/0236891), because that application (which was never discussed during prosecution) allegedly discloses a distinct no RF transmission period that precedes a first period of handheld-initiated RF communication. Defendants' invalidity argument based on Glass involves questions of fact and a different

standard of proof, *Praxair*, 543 F.3d at 1327, and the Court will not consider it at claim construction. That is not to say that it is never appropriate to consult prior art references in the prosecution history to inform the meaning of the claims. In *V-Formation, Inc. v. Benetton Group SpA*, *supra*, for example, the court considered a patent referenced in the prosecution history that contained the same phrase (“releasably attach[ed]”) as was in dispute and found that the reference confirmed that the correct interpretation of the phrase as used in the patent-in-suit did not include rivets, because rivets were depicted in the reference as “permanently,” not “releasably,” attached. *V-Formation*, 401 F.3d at 1312. By contrast, the Glass reference does not use the claim phrase at issue. Furthermore, the definition that Defendants attempt to persuade the Court should be inferred from the general disclosure of Glass is contrary to the ‘716 Patent’s specification and the claims themselves. For all these reasons, the Court will not consider the Glass reference at this time.

**b. “responsive to receipt of user selection”**

Plaintiffs’ Proposed Construction: initiated by the user selection.

Defendants’ Proposed Construction: initiated by the receipt of the user selection by the processor of the handheld device, but not necessarily immediately thereafter in time.

The Court’s Construction: initiated by the receipt of the user selection.

The parties agree that the term “responsive to receipt of the user selection” means that the first RF transmission period is “initiated by the receipt of the user selection.” This position is supported by the patent specification and the language of the claims themselves. The sole dispute concerns Defendants’ proposed addition of the phrase “but not necessarily immediately thereafter in time” to the end of the claim phrase that the Court has been asked to construe. However, Defendants’ proposed language leaves open the possibility that the first RF transmission period *may or may not* be immediately thereafter in time. Because the claim

language itself does not foreclose either possibility, the Court believes the additional language proposed by Defendants would be superfluous and confusing to a jury, and the Court declines to adopt it. Accordingly, the Court construes the disputed phrase to mean “initiated by the user selection.”

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In summary, the Court construes the wherein clause of claim 1 to require that the first period of RF transmission corresponds to the transmission of an RF signal by the handheld device and that this first period of RF transmission (1) occurs after a non-overlapping or separate period of time during which there is no transmission of an RF signal between the handheld device and the receiver; and (2) is initiated by the user selection from the input selection control. The claim does not require that the “distinct period of no RF transmission” also be initiated by the user selection.

**3. [claim 8] wherein the second period of RF transmission is followed by a distinct period of no RF transmission**

Plaintiffs’ Proposed Construction: The second period of RF transmission of the system is followed by another definable period of time during which there is no transmission of an RF signal between the handheld device and the receiver.

Defendants’ Proposed Construction: cannot be construed based on Defendants’ construction of “distinct period of no RF transmission.”

The Court’s Construction: The second period of RF transmission is followed by another non-overlapping or separate period of time during which there is no transmission of an RF signal between the handheld device and the receiver.

Claim 8 depends from claims 1 and 5, but it further requires that the second period of RF transmission [claim 5] is followed by a distinct period of no RF transmission. The Court construed “a distinct period of no RF transmission” above. Generally, terms are to be construed to have a consistent meaning throughout the claims of the patent. *Phillips*, 415 F.3d at 1314.

Therefore, this construction applies equally to claim 8. Thus, the “distinct period of no RF transmission” that follows the second RF transmission period is simply another period of time during which there is no RF transmission between the handheld device and the receiver and that does not overlap the transmission periods. This construction is consistent with the portion of the specification stating that “another distinct period of no RF transmission follows” the *termination* of transmissions (‘716 Patent, col. 10, ll. 16-18), just as such a period precedes the *onset* of RF transmissions.

Defendants argue that claim 8 is ambiguous and cannot be construed. But that argument depends on the Court’s adoption of Defendants’ proposed construction of the term “distinct period of no RF transmission” in claim 1 which, among other things, calls for the period to begin with user selection, which clearly cannot be the case for the distinct no RF period of claim 8 that follows the termination of RF transmissions. Because the Court does not adopt Defendants’ proposed construction, Defendants’ argument with respect to claim 8 is moot. Furthermore, Defendants have not presented the Court with an alternative proposed construction for the phrase as it occurs in claim 8. For that reason as well, the Court must resolve this dispute in Plaintiffs’ favor.<sup>10</sup>

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<sup>10</sup> Defendants have argued that the indeterminate length of the distinct periods of no RF transmission is another ground for indefiniteness. However, that is an argument concerning an alleged inability of an infringer to know whether he is infringing, which is a different issue than whether a term or phrase is ambiguous, and is not properly addressed at *Markman*. See *Smithkline Beecham Corp.*, 403 F.3d at 1339-40.

**4. [Claim 9] wherein the defined RF profile includes a transmission interval separating periodic retransmissions of the RF signal.**

Plaintiffs' Proposed Construction: the communication protocol of the wireless system includes regular or irregular amounts of time between repeated retransmission attempts.

Defendants' Proposed Construction: wherein the RF profile with an identifiable start point and an end point stored on the handheld device includes a time interval having one set length between repeated retransmission attempts.

The Court's Construction: the communication protocol of the wireless system includes regular or irregular amounts of time between repeated retransmission attempts of the handheld device's RF signal.

The Court's construction of the "defined RF profile" applies to claim 9 and will not be repeated. However, there is an additional dispute in this dependent claim over the transmission interval, i.e., that period of no transmission between attempted retransmissions of the handheld device's RF signal. The issue is whether the claim term "a transmission interval" should be limited to a time interval having one set length or whether it can include regular or irregular amounts of time.<sup>11</sup>

The parties' dispute is over the usage of the indefinite article "a." Plaintiffs contend that the phrase "a transmission interval" does not require that the interval be the same each time; rather, they contend that it may vary. As Plaintiffs point out, the patent specification contains several statements to this effect. For example, the specification provides:

In one embodiment, the transmission interval logic generates a transmission interval by generating a random number. In another embodiment, the transmission interval is calculated according to a mathematical function. . . . In another alternative embodiment, the time interval may vary with each retransmission of a selection.

'716 Patent, col. 5, ll. 22-25; 33-34. In addition to the varied intervals, the patent also discloses one embodiment in which a transmission interval is fixed at 5 milliseconds. *Id.*, col. 9, ll. 36-38.

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<sup>11</sup> Plaintiffs seek construction of the entire quoted phrase, whereas Defendants seek construction only of the term "a transmission interval separated by periodic retransmissions." The Court treats these two requests together.



Although Defendants conceded in their briefs that the specification discloses both varying and fixed intervals, they argue that the use of the indefinite article “a” requires restricting the phrase’s meaning such that each interval between retransmission is the same length. However, the claim construction rule for indefinite articles is clear: “[u]nless the claim is specific as to the number of elements, the article ‘a’ receives a singular interpretation *only in rare circumstances when the patentee evinces a clear intent to so limit the article.*” *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000) (emphasis added). *See also Baldwin Graphic Sys., Inc. v. Sibert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008) (emphasizing this can “best [be] described as a rule, rather than merely as a presumption or even a convention.”)

The Court does not find that the patentee here evinced a clear intent to limit the claim to a transmission interval of a single length. The mere use of the indefinite article “a” in the claim cannot stand as evidence of the inventor’s intent; if it did, the rule on interpreting indefinite articles would be unnecessary. Moreover, that the specification describes both fixed and variable intervals shows that the patentee’s intent was the opposite: to be inclusive, not limiting. Accordingly, the Court adopts the Plaintiffs’ construction allowing for intervals of both fixed and varying length.

**V. CONCLUSION**

For the foregoing reasons, the Court construes the terms at issue as follows:

*Encoding*: to convert data.

*Decode*: to convert data by reversing the effect of previous encoding.

*A defined RF profile*: a communication protocol for a wireless system for which meaning is provided by the language of the claims.

*A first period of RF transmission corresponding to transmission of the RF signal, where the first period of RF transmission occurs after the distinct period of no RF transmission and is responsive to receipt of the user selection from the input selection control*: The RF profile includes a first period of RF transmission that corresponds to transmission of an RF signal by the handheld device that (1) occurs after a separate or non-overlapping period of time during which there is no transmission of an RF signal between the handheld device and the receiver and (2) is initiated by the user selection from the input selection control.

*A distinct period of no RF transmission*: a separate or non-overlapping period of time during which there is no transmission of an RF signal from either the handheld device or the receiver.

*Responsive to receipt of the user selection*: initiated by the receipt of the user selection.

*Wherein the second period of RF transmission is followed by a distinct period of no RF transmission*: The second period of RF transmission is followed by another separate or non-overlapping period of time during which there is no transmission of an RF signal between the handheld device and the receiver.

*Wherein the defined RF profile includes a transmission interval separating periodic retransmissions of the RF signal*: the communication protocol of the wireless system includes regular or irregular amounts of time between repeated retransmission attempts of the handheld device's RF signal.

**IT IS SO ORDERED.**

**/s/ Peter C. Economus – March 31, 2009**  
**PETER C. ECONOMUS**  
**UNITED STATES DISTRICT JUDGE**